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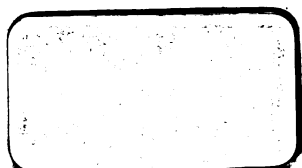
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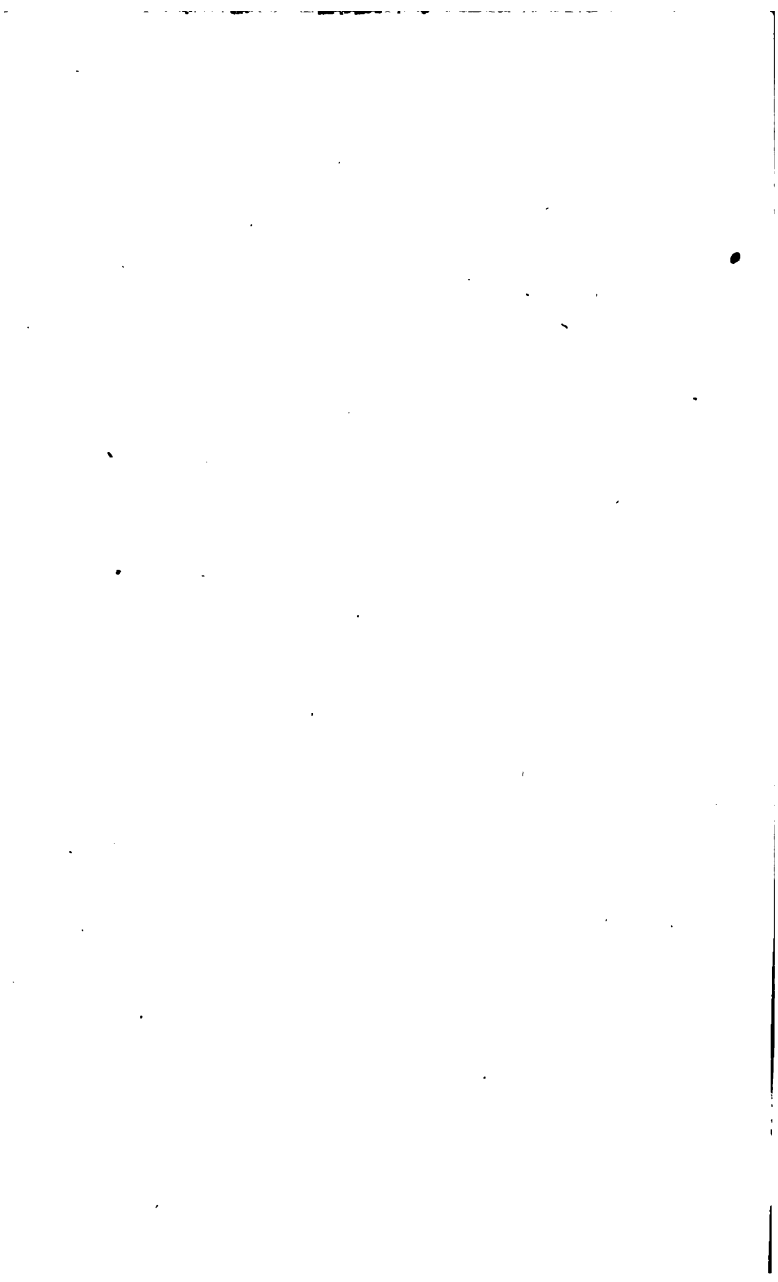
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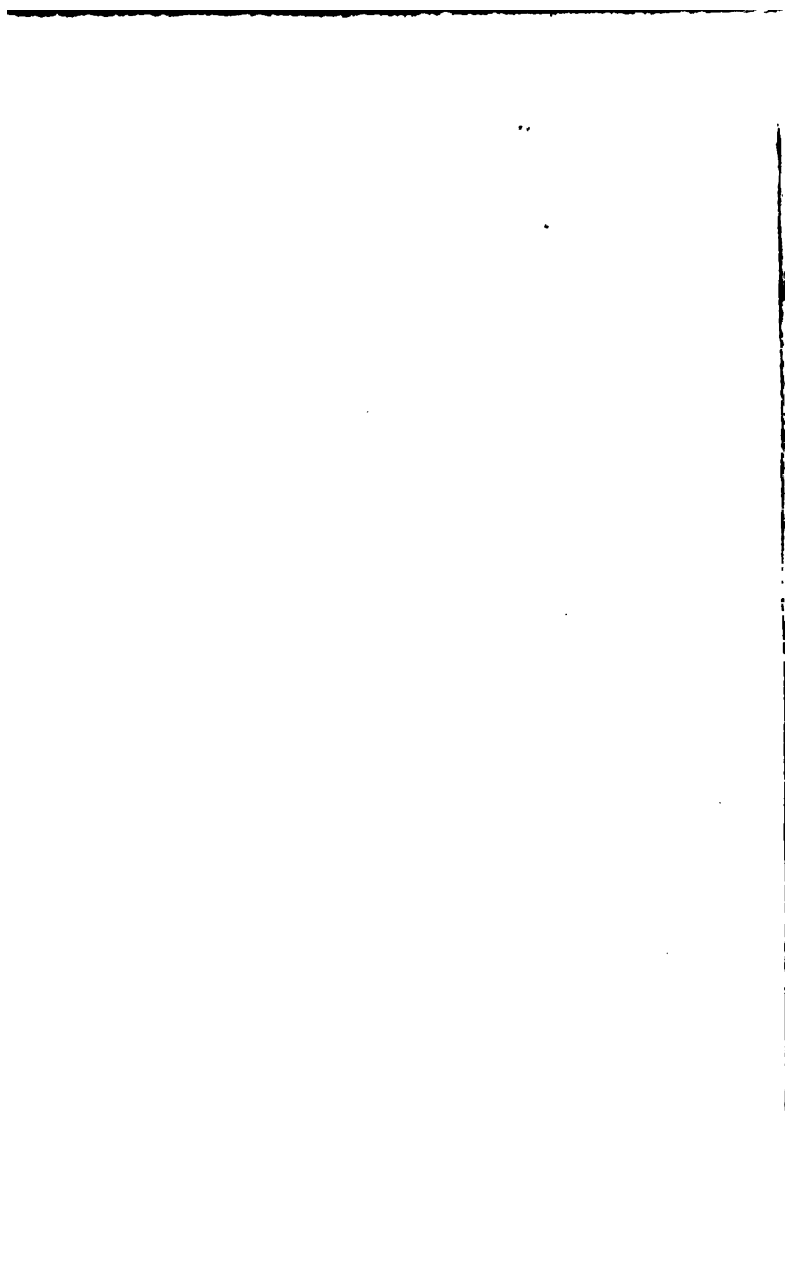
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HÆMORRHOIDS
AND
PROLAPSUS OF THE RECTUM.



HÆMORRHOIDS

AND

PROLAPSUS OF THE RECTUM:

THEIR

PATHOLOGY AND TREATMENT;

WITH ESPECIAL REFERENCE TO THE APPLICATION
OF NITRIC ACID.

BY

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J. E. ADLARD, BARTHOLOMEW CLOSE.

TO
JOHN WIBLIN, Esq., M.D., F.R.C.S.,
OF SOUTHAMPTON.

MY DEAR WIBLIN,

You were pleased to express yourself to me in high terms of this work in its original form. I cannot do better than dedicate the production, in its enlarged and improved condition, to one, who, during many years of friendship, has shown me great personal kindness, and who deservedly holds such an honorable position in the ranks of our Profession.

I remain,

Your faithful friend,

HENRY SMITH.

P R E F A C E.

THE former edition of this work consisted merely of a reprint of some papers which were originally published in the 'Medical Times and Gazette,' and which were written for the purpose of showing the value of the local application of nitric acid in certain cases of Hæmorrhoidal disease and Prolapsus of the Rectum. In preparing this new edition, I have not confined myself mainly to an enquiry into the efficacy of one particular remedy, but have taken the opportunity to consider at some length the pathology and general treatment of the diseases in question. At the same time, the employment of nitric acid holds a pro-

minent place in this treatise, because it is, when used with judgment and in proper cases, a very valuable agent, and one which is not sufficiently appreciated by the majority of Surgeons.

14 CAROLINE STREET, BEDFORD SQUARE ;
February, 1860.

HÆMORRHOIDS

AND

PROLAPSUS OF THE RECTUM.

HÆMORRHOIDS.

THE rectum is very liberally supplied with blood, from numerous arteries and veins ramifying over and through its structure, the greater portion of which run immediately beneath the mucous membrane, between that and the muscular tissue. Both arteries and veins freely inosculate with one another. The latter possess no valves, and empty themselves into the inferior mesenteric, which assists in forming the great vein going to circulate through the liver.

From the circumstance that the lower extremity of the rectum is so vascular, that the veins possess no valves, and that the part is being periodically subject to mechanical disturbance, it is not a matter of surprise that hæmorrhoids, which in reality are composed of structure in

which blood-vessels are a main element, occur so frequently as they do. It has been customary for surgical writers to divide hæmorrhoids into two distinct kinds, namely, internal and external. This is a classification from which it is as well not to depart; for, although many instances occur where it is impossible to define exactly the nature of the affection,—an internal hæmorrhoid being at one time external, from some accidental cause,—nevertheless, the pathological circumstances which exist, or which occur during the persistence of the disease, differ so widely, that it is of the utmost importance to have a right knowledge of them, in order to adopt a correct mode of treatment.

External hæmorrhoids are situated at the verge of the anus outside the sphincter, and consist of one or more tumours, composed at their first formation of dilated vessels. As the disease increases, from various irritating causes, the sensitive skin around the anus becomes thickened, the cellular tissue is indurated and infiltrated, and the veins are expanded. By degrees the swelling becomes larger and harder, and does not give much annoyance when the parts are in a quiescent state; if, however,

they become attacked with inflammation, the tumour increases much in size, the blood in the veins becomes coagulated, distends the coats, and not unfrequently the vessel gives way, allowing the coagulated blood to escape into the surrounding cellular tissue, where it will form a distinct sheath for itself. In the course of time the inflammatory action subsides, the blood becomes absorbed, and the tumour diminishes in size, or wholly disappears. If, however, the same irritating causes recur, and nothing effectual is adopted, the tumour again increases, the skin becomes more thickened, the cellular tissue more extensively infiltrated, and in this way distinct and permanent tumours are formed around the anus, which sometimes reach a large size, consisting mainly of thickened integument and cellular tissue, enclosing veins which are at times capable of distension and repletion. In their quiet state these tumours are distinctly external; but when increased in size, they may encroach upon the cavity of the rectum, and be covered with mucous membrane, and thus be partly internal. There is not unfrequently a very cedematous condition of the cellular

tissue and mucous membrane at the very verge of the anus.

With regard to the actual structure of these hæmorrhoidal tumours, it will be found, on examination, that they are composed of thickened integument, infiltrated cellular tissue, and in most cases of one or more dilated veins; if the part is at perfect rest, and has not been lately inflamed, there may be distinguished nothing beyond infiltrated tissue and thickened skin, but in cutting into an external pile, which has been somewhat irritated, or is increasing in size, there will be found either a vein considerably dilated and containing semi-coagulated blood, or the blood will have escaped from the vessel, and have become either extravasated with the surrounding cellular tissue, or have formed for itself distinct cellular sheaths. This coagulation of the blood is the reason why an incision into an external hæmorrhoidal tumour, after having become inflamed and swollen, is scarcely ever attended with bleeding, and it is one of the main pathological features in this form of tumour, and far different from what obtains in instances of the internal affection.

These external hæmorrhoids vary much in

size; sometimes the swellings not being larger than peas, at other times they are seen the size of a walnut; their presence is accompanied with unpleasant symptoms, as irritation, pain when at the closet, and a sense of bearing down, even when they are in a quiescent state; but the main source of suffering, is their disposition to become suddenly enlarged and inflamed, which occurrence will arise from allowing the bowels to become constipated, from the straining attendant upon a stricture of the urethra, from excess in food and drink, or from exposure to damp and cold. Under these circumstances, the tumour, which has been hitherto small and flaccid, becomes much swollen, distended, and livid in colour. From the peculiarly sensitive character of the skin at the anus, this distension is accompanied with the most exquisite pain, and it is remarkable to witness the complete prostration with which the most powerful man is overcome when suffering from acute inflammation of external piles, and especially when the symptoms have been allowed to go on for some days, without the proper means of relief being afforded, either from obstinacy on the part of the patient, or from insufficient patho-

logical knowledge on the part of the medical attendant.

With regard to the causes which produce this form of hæmorrhoids; there is every reason to believe that the same circumstances which tend to the production of external, induce the internal affection as well, and therefore this description will apply to both. It appears with reason, that there is in some persons an hereditary disposition to hæmorrhoidal affections, and we shall every now and then see father and son, or mother and daughter, suffering one after the other in the same way. Possibly, however, this may be owing to similarity in habits, certain of which, undoubtedly, much more than others, induce these affections. Thus, those who have to sit continually at the desk, and take little walking exercise, are very liable to them; those, too, who have to stand long in certain positions, as dentists and hair-dressers, are remarkably prone to hæmorrhoids. The great source of hæmorrhoidal affections, however, is anything which prevents the healthy return of the blood from the vessels of the rectum; and thus it is, that congestion of the liver or other obstructive disease of the same viscus is frequently associated

with these affections; a constipated state of the bowels, both from the mechanical effect produced upon the vessels, and from the straining efforts necessary to unload the bowels, is found to be the cause in a vast number of cases; the pressure also caused by the pregnant womb and by ovarian tumours, produces hæmorrhoids. In other cases the irritation caused by the frequent taking of aperient medicines, is reasonably considered to be productive of the first symptoms of the disease. Violent horse exercise, indulgence in the use of highly seasoned dishes and other indigestible food, and strong wines, together with immoderate sexual intercourse, which determines the blood more freely to the pelvic region, are each fertile sources of hæmorrhoidal affections; and it is highly necessary, before any treatment is commenced, to inquire carefully into the peculiar habits of the patient.

The symptoms which external hæmorrhoids produce, have been already referred to; but before proceeding to consider the treatment which is proper for them, it will be as well to detail them more particularly. When the hæmorrhoidal swellings are small, and in a quiescent state, there is very little suffering

produced; the patient complains chiefly of itching and irritation, and of uneasy sensations which every now and then amount to pain, especially after the evacuation of the bowels. Sometimes there is a slight bleeding, but this does not often occur from external piles. When, from any of the causes which have been before mentioned, the hæmorrhoidal tumour becomes inflamed, the most excruciating pain is produced, so that the patient is unable to sit down, and if the symptoms are not relieved, great restlessness and sympathetic fever comes on, so that he appears to be suffering from a much more alarming disease than is actually present.

The treatment which should be adopted for the removal of this affection must be conducted upon the ordinary principles of surgery. In the more simple cases, little beyond a strict attention to ablution, to the regular action of the bowels, and the avoidance of those causes which are known to produce the affection, will be necessary. If the bowels are inactive, a draught of cold water before breakfast, or the use of brown bread, with a moderate amount of walking exercise, will in many instances

beget a healthy tone in the intestinal canal ; if, however, aperient medicines are needed, they should be of the mildest description. The compound rhubarb pill, in doses of five grains, taken occasionally before dinner, or before going to bed, is a simple and unirritating aperient. A teaspoonful of the confection of senna, is also an useful and efficient aperient. If there be much irritation about the anus, an occasional dose of calomel should be taken, either before or in conjunction with these medicines. At the same time that great care is taken to provide a healthy action of the bowels, local remedies should be made use of. The ordinary lead lotion, or one made of one or two grains of sulphate of zinc to an ounce of water, should be applied to the parts morning or night : or if a more powerful astringent application is required, the patient should use the compound gall ointment, which is an admirable agent. By these means, and by careful attention to diet, most of the ordinary cases of external piles presented to our notice may be cured, or so relieved, that they will hardly excite attention.

If, however, one or more of these tumours

have become enlarged and inflamed, a much more energetic treatment is required, for there is in such cases very great suffering, both local and general. If there is much swelling, and the parts are exquisitely sensitive, the patient must be confined to bed, leeches should be applied to the part, and the bleeding should be encouraged by warm fomentations; and subsequently poultices, made either of warm bran, or of bread into which half a drachm of laudanum is dropped, should be applied, and changed from time to time. Opium should be given internally, and as soon as relief from pain has been procured, the bowels should be thoroughly cleared by a saline purgative. The subsequent employment of a lotion, composed of Lotio Plumbi, Liquor Ammoniae Acetatis, and spirits of wine, one ounce of each of the latter to six ounces of the former, will cause a shrinking and collapse of the swelling.

Not unfrequently, however, the surgeon is called to a case where most or all of these measures have been tried, and yet the patient is suffering acutely, and on examination it will be found that on one side of the anus there is a tumour of a circumscribed form, of a blue

colour, and in a state of great distension. In such an instance, the suffering is produced by the accumulation and coagulation of the blood, and the proper treatment to pursue is to puncture this swelling freely with a lancet ; there is an escape of coagulated or semi-fluid blood, with almost immediate relief to the painful symptoms. The subsequent application of cold water, or the lotion above mentioned, to the parts freely, will cause an almost entire removal of the disease : if, however, there is much loose and thickened skin over the site of the swelling, it should be removed with sharp scissors after the part has been punctured.

After repeated attacks of this nature, the anus becomes surrounded with distinct tumours, more or less pendulous, and liable to become swollen and inflamed ; for this state of things a surgical operation is required. It is, however, a simple one, and consists of the removal of these excrescences, by sharp curved scissors. As the patient kneels upon a chair, or lies upon his side, the surgeon should lay hold of each tumour with a hooked forceps, and excise them with the scissors placed flat upon the skin.

Chloroform is rarely necessary ; but if the

patient is exceedingly timid, the parts may be benumbed with the ice and salt, and thus much pain may be escaped. There is generally very little bleeding, especially if great care is taken not to snip any of the mucous membrane.

Simple as this operation is, it may, in unsurgical hands, be so mismanaged, as to bring about serious results. If too much of the lax skin around the anus be taken away at the same time that the tumours are excised, the parts in healing will cicatrize so that severe contraction of the anus may follow, and the patient be placed in a most miserable plight.

The same effect is likely to be produced if the mucous membrane, at the verge of the anus, is interfered with to any great extent; therefore, unless there is an absolute necessity for this step, this membrane should not be cut, and only the external hæmorrhoids, with portions of the redundant integument, should be excised. Both Mr. Quain and Mr. Ashton have referred to the probability of contraction of the anus occurring after an operation improperly performed, and very recently a melancholy instance of this was presented to my notice.

A lady, in the prime of life, and suffering

from external hæmorrhoids, was induced to put herself under the care of a physician-accoucheur in London, who, without hesitation, undertook to perform the necessary surgical operation upon her, in April. The cicatrization arising from the wounds made was such that, in June, complete obstruction of the bowels occurred, and her life was placed in great danger, the orifice of the anus being then nearly closed. Treatment for the stricture was then commenced, by the use of bougies, and in September she consulted me. On examination, I found the natural folds of the anus entirely destroyed, and that orifice almost obliterated by a dense, unyielding stricture, which, I ascertained by the introduction of the point of my forefinger, a step of difficulty, and painful suffering to the patient, extended for about an inch up the gut. This lady was in great dejection about herself, as she was about to return to India, and she found the introduction of bougies painful. I recommended her to have an incision made on each side of the anus, and then continue the bougies; but she had such a horror of another operation, that she would not consent to it.

It is an unpleasing task to cast blame upon a professional brother, but there cannot be a doubt that the unfortunate state of things here was the result of an ill-judged and ill-performed operation—and, that had this poor lady been under the care of a surgeon in the habit of dealing with these cases, the thing could not have occurred. It is not the first time I have witnessed most lamentable results from physicians undertaking surgical operations.

Internal hæmorrhoids are more frequent, or at all events are more often presented to the notice of the surgeon, because they are productive of much more distress, and more serious consequences are liable to result from them than from the affection situated externally; and here it will be as well to mention the symptoms which are produced by them, and which are local and general.

The first local symptom which attracts the notice of a patient suffering from internal piles, is in many cases a more or less profuse attack of hæmorrhage, which may not recur for some weeks or months, but which may persist. More or less weight and uneasiness are felt at the seat, and in course of time there will be

considerable pain when the bowels are evacuated. As the swelling or swellings increase in size, the evacuation of the contents of the rectum will be more difficult and more painful; straining efforts are necessary, hence the hæmorrhoidal tumours become protruded on each visit to the closet. At the earlier periods of the disease, they may be with facility returned, but as time wears on, the pain attending defæcation becomes more severe, and the process of returning the piles becomes more difficult. Not only, however, do they protrude at these times, but if the patient neglects advice, the tumours come down below the sphincter whenever he takes walking exercise; the constriction caused by the muscle produces congestion in the piles, and extreme pain, which is only relieved by their reduction, or by a spontaneous flow of blood, which, however, occurs at most inopportune periods. In addition to these symptoms, there is pain and uneasiness felt in the loins and down the thighs, more especially in females, who very often suffer most acutely, and not unfrequently have their sufferings referred to that prolific storehouse of morbid phenomena, the womb. There is,

moreover, a considerable discharge of mucus or muco-purulent fluid from the anus ; the bladder is rendered at times very irritable, and retention of urine not unfrequently takes place.

Patients who suffer from internal hæmorrhoids, are liable to get them inflamed from some exciting cause, such as an excess at the table, or great irritation of the bowels, and then the symptoms are extremely severe; the tumours become inflamed, gorged with blood, protrude beyond the anus, and become constricted by the sphincter. Violent pains are experienced in the pelvic region, and there is a high state of constitutional disturbance, denoted by flushed face, furred tongue, rapid and wiry pulse, and extreme restlessness. If these symptoms are not relieved, either by the accidental induction of bleeding, or by surgical assistance, the congestion and inflammation increase, and to such an extent, that mortification of the hæmorrhoidal masses ensues, and thus is produced a natural cure ; but, on the other hand, it is not desirable to encourage this rude attempt at cure, for death may occur from the violent action set up. Dr. Bushe mentions having seen such a case occur.

When internal hæmorrhoids have existed for a length of time, the general health becomes much influenced, the patient complains of indigestion, flatulence, and inability to follow his ordinary occupation or amusement; moreover, if, as is frequently the case, the disease is attended with periodical bleedings, the face becomes blanched, the pulse weak and rapid, and other well-known symptoms of loss of blood ensue. This is the most serious condition connected with hæmorrhoids of long standing, and hence the reason why it is most important to adopt the proper treatment at an early period of these affections.

Internal hæmorrhoids present various appearances. On making an examination of a patient who suffers from the milder form of the affection, the veins of the lower extremity of the rectum, just within the anus, will be found enlarged and distended, forming small fusiform tumours, of a dark-blue colour, covered by a somewhat thickened mucous membrane. In other instances, and especially where the patient complains of bleeding and sense of weight, with scarcely any protrusion, the inferior extremity of the rectum, for an inch or more, will

be found to be highly congested and vascular ; the mucous membrane having, here and there, distinct patches of morbid vascularity, from which, through a speculum, which it is necessary to use in such cases, blood of an arterial colour will be seen to issue. This is the condition which the late Dr. Houston, of Dublin, likened to the diseased lining membrane of the palpebræ, in cases of chronic conjunctivitis. In the majority of instances, however, of internal hæmorrhoids, one or more distinct tumours, of a rounded or oblong form, will be seen to fill up, as it were, the orifice of the anus. In some cases, their character and size can be ascertained by an ordinary inspection, but it is always best, in order to arrive at a proper diagnosis, to throw up the bowel an injection of warm water, and allow it to be discharged before the examination is made ; by this means the tumours are brought fairly down. There are frequently two or three distinct tumours, varying from the size of a four-penny piece to that of a walnut. In one case the diseased part presents a bright-red appearance, easily bleeds when touched, and is sessile and not very raised ; in another case the tumour is large,

prominent, of a deep-blue or reddish-brown colour, having a broad base, or being attached by a narrower peduncle, and does not bleed when touched ; in these cases the vessels appear to be largely dilated, the mucous membrane covering them being shining and tense, or thick, granular, and slightly ulcerated. Besides these appearances, portions of the mucous membrane, highly vascular and thickened, may be prolapsed at one or more points, as a consequence of the mechanical weight of the internal tumours. In by far the majority of cases of long-standing piles, the integument surrounding the anus is in an unhealthy condition, being much thickened, and now and then forming a distinct ring, or long pendulous flaps.

There is one point of importance connected with the seat of internal hæmorrhoids which should not be overlooked, but which, as far as I am aware, has not been mentioned by any writer on this subject. The circumstance I refer to is this—that occasionally instances are met with where the hæmorrhoidal tumours are placed as it were in separate rows, so that two or three distinct masses exist near the anus,

and about half an inch or more above. Other tumours of a similar nature are disposed just in the same way. There are one or two specimens indicating this in the Museum of the Royal College of Surgeons. This is a condition of practical importance, for it shows how necessary it is to make a most thorough examination of a person suffering from internal piles. Cases every now and then occur where the ligature has been applied to one or more internal tumours presenting themselves at the anus; and, as the operator is thinking his proceedings are satisfactorily terminated, the patient makes some violent straining effort, and another tumour or series of tumours which have escaped notice hitherto, are forced into view. These are formed higher up in the bowel, and do not generally protrude; but, if a satisfactory cure is expected, they must not be left alone.

As regards the structure of internal hæmorrhoids—when first forming, they are composed, in many instances, simply of dilated veins; in others of dilated veins and arteries too. As the diseased condition increases, the cellular tissue, in connexion with the vessels, becomes

thickened and infiltrated in a more or less circumscribed space; the mucous membrane also becomes thickened, and is bulged out by the increase in the size of the vessels, and thus distinct tumours are formed. The surface of the mucous membrane becomes also exceedingly vascular. On making a section of the lower part of the rectum in cases of old standing piles, the veins will be found to be greatly dilated, sometimes partially and irregularly, so that there will be the appearance of distinct cysts. In other instances the dilated vessels will be found to be filled with coagulated blood and fibrine. In those cases where the hæmorrhoids are of a very bright red colour and sessile, not unlike a strawberry in appearance, and easily bleeding, the structure consists mainly of a series of small arterial ramifications; but, where the tumours are of a darker colour, and like a mulberry, they are composed of veins to a large extent, although, no doubt, the arteries enter as well into their formation, and to a considerable extent; for, when their mucous covering is pricked or incised, the blood which flows is of an arterial hue. In those cases of very long standing, and where

the tumour has become very large, and has been submitted to great irritation, a section will reveal scarcely anything beyond a mass of highly condensed and thickened cellular tissue, with some vessels penetrating the base of the tumour.

The treatment of internal hæmorrhoids requires more consideration than that which is adopted for the disease when situated externally. In the cases where the piles have not existed long, are not large, and give only temporary annoyance, much may be done by the patient paying simple attention to his habits, and avoiding those exciting causes which engender the disease. If it is ascertained that a sedentary life has produced the affection, by determining the blood to the rectum, the patient should take as much walking exercise as possible; if the bowels are sluggish, their action should be encouraged by a compound rhubarb pill, or by a teaspoonful of the confection of senna; and a quarter or half a pint of cold water, or of infusion of quassia, should be thrown up the rectum daily. Dietetic rules must be strictly attended to; for many patients, especially those who are robust, and whose circulation is slug-

gish, will tell us that they feel much more annoyance from piles after they have been dining out, or have taken larger quantities of wine than usual. Hence the necessity of those who suffer from internal hæmorrhoids, to abstain as much as possible from the pleasures of the table. Women in an advanced state of pregnancy, suffering from the irritation of piles, should be very careful about the condition of their bowels, and should keep the horizontal posture as much as possible.

When internal hæmorrhoids increase to such an extent as to protrude at the closet, and produce considerable pain and bleeding, greater precautions and more decided treatment are needful. The bowels should never be allowed to become costive, so as to necessitate straining efforts; the protruded parts should be carefully sponged with cold water, or with a strong infusion of quassia, or of decoction of oak-bark and alum, in the proportion of half a drachm of the salt to twelve ounces of the former, and should be carefully returned by the patient; or, instead of these lotions, the gall ointment may be smeared over the piles with great benefit. The bleeding, which is often very

annoying, may be checked by an injection of sulphate of iron and water in the proportion of one to two grains of the former, to an ounce of the latter; or if necessary, a lotion of tannin in the proportion of eight grains to an ounce may be used; but it must be borne in mind, that a moderate amount of bleeding in persons who live high, and whose vascular system is excited, is beneficial than otherwise, and should not be interfered with; the popular notion as to bleeding from piles being salutary, is by no means incorrect when applied to certain cases. When, however, the hæmorrhage arises from some peculiar pathological change in the tumour, such as ulceration or excessive vascularity of the mucous membrane; and when it becomes continuous, and goes on to such an extent as to interfere with the patient's health, producing a pallid face, a weak pulse, and irritable heart, it should be put a stop to.

A very common internal remedy for piles is the confection of black pepper, in the dose of a drachm twice a day. It may be given by itself; or, as I often use it, mixed with an equal part of confection of senna; it is difficult to say how the remedy acts; but it certainly does good

not only in this affection, but it is highly serviceable in other affections of the rectum, and especially in those cases where the wound become sluggish in healing after the operations for fistula, or for fissure of the anus.

From the close connexion between the neck of the bladder and the rectum, it follows that the affections of the former viscus, together with those of the prostate gland, or urethra, will influence the rectum much ; and thus, in middle-aged or elderly men, special inquiry should be directed to these parts ; for not unfrequently hæmorrhoids and prolapse of the rectum will be found to be much aggravated, if not caused, by the violent straining efforts made in the difficult attempts to pass water. If stricture exists, the urethra must be dilated before there can be any hope of curing the piles ; and even if there be not any stricture, and yet there is a loss of the contractile power of the bladder from debility or old age, this viscus should be artificially emptied by the catheter.

When internal piles become inflamed and protruded beyond the sphincter, the patient will suffer much, both locally and constitutionally ; he must be confined to bed, and the piles,

if possible, should be carefully returned by the surgeon ; but, if this be a work of great difficulty from swelling and congestion, leeches should be applied, and subsequently warm fomentations and poultices. Ice, locally applied in a bladder, is a valuable agent to diminish inflammation and pain ; opium should also be given in full doses. Any operation which may be considered advisable should not be put in force whilst the hæmorrhoids are in a state of actual inflammation. Sometimes, as I have before stated, the constriction of the sphincter produces sloughing, and a spontaneous cure takes place ; if this is occurring, the process must be expedited by the liberal use of warm bathing and poulticing, and pain must be conquered by the administration of opium.

By the adoption and right application of these remedial measures a large proportion of cases of internal hæmorrhoids may be cured, or relieved to so great a degree as to prevent annoyance ; but many of those cases which are presented to the notice of the surgeon have existed so long, have reached such a size, and are productive of such troublesome and even serious symptoms, that some active surgical interference is required, in order to bring about a cure or produce efficient

relief. Originally, the usual remedy in aggravated cases was the excision of the diseased part, and it was a remedy accompanied with little pain or difficulty; but the danger of hæmorrhage proved to be so great, that, after the sacrifice of several lives, the practice has almost been abandoned. It is necessary, even when the excision of external piles is being performed, to take care that the mucous membrane is not too freely clipped, otherwise dangerous bleeding may result. I saw a gentleman nearly lose his life from the inclusion of a portion of mucous membrane in the blades of the scissors during an operation for external hæmorrhoids—the operation was done at two p.m., and at six I was sent for, and found that he had been bleeding profusely. The practice of excision may then be dismissed from our consideration; not forgetting, however, that Mr. Henry Lee recommends a method in his *Pathological and Surgical Essays*, by which the tumour is excised and the bleeding base touched with nitric acid. Of this plan, however, I have had no experience.

The removal of internal hæmorrhoids by the ligature, is the method which has been commonly followed of late years; and it is necessary to de-

vote more consideration to this part of the subject, as this treatment is most generally adopted by the very best surgeons of the day. The manner in which the ligature acts, is by the strangulation of the vessels which supply and form the tumour ; the result is sloughing of the tied part, and its subsequent removal in a few days ; a sore is left on the separation of the thread, and this, in healing, cicatrizes, contracts, and braces up the neighbouring tissues, so that, in addition to the bodily removal of the tumours, the tendency to their reproduction, or to any protrusion of the mucous membrane, is diminished by the result of this process.

It is undeniable that the ligature is an admirable remedy ; and that it is calculated, when properly applied, to bring about a cure in the worst forms of internal hæmorrhoids ; but its employment is open to some objections, which it is right to mention.

In the first place, it is necessary that those who undergo the operation by the ligature, should be confined to their bed for some days ; in the next place, the process of applying the ligature is attended sometimes with considerable suffering. In some conditions of the constitu-

tion, a low inflammation of an erysipelatous character may ensue and spread along the intestinal tract, producing the most severe and even serious symptoms. Pyæmia also has occasionally ensued after this operation, and has destroyed life: Sir Benjamin Brodie, Sir Astley Cooper, Mr. Henry Lee, and others, have mentioned fatal cases from this cause. Tetanus has also carried off patients who have undergone this operation.

I dwell more particularly upon these untoward events, because it is rather the fashion to look upon the operation by ligature as a perfectly safe proceeding. Mr. Syme has even gone so far, as to state his opinion that "it may be used without the slightest risk of any serious inconvenience."* Now I do not hesitate to say, that no surgeon who is acquainted with the literature of this subject is justified in making a statement so strong as this, even though his own experience of the operation may have been of the most favorable kind.

I hope I shall not be looked upon, from the previous remarks, as an opponent of the ligature;

* 'On Diseases of the Rectum,' Third Edition, p. 8.

on the contrary, I believe that this proceeding is indispensable in certain cases; that when properly applied, and followed by proper treatment, it is an admirable remedy, and generally productive of a perfect cure; and, as regards danger to life, although there is some risk, with which the patient should be made acquainted, it is undoubtedly small; and this may be lessened by taking care not to operate on persons who are much broken down in health, or suffering from any organic disease of the intestines, liver, or kidneys.

The ligature is necessary in those cases where the hæmorrhoidal tumours are large, well defined, and prominent, and where they present a dark-blue appearance, as though they consisted mainly of venous ramifications. It is moreover necessary in those instances of internal hæmorrhoids, where the tumours are perhaps of a bright-red colour and easily bleed—but their dependent portions, from continued prolapse and irritation, and from existing many years, have become very much thickened and indurated. It is also necessary in those cases where there is a considerable amount of prolapsus attending upon the original affection; and if an alarming

amount of hæmorrhage has been the most prominent symptom, and this bleeding proceeds from a distinct tumour, the ligature should undoubtedly be applied.

This proceeding is also well adapted for those cases where patients are exceedingly sensitive and nervous, and will not allow more than one operation to be performed; in one of the last cases I applied the ligature; the disease might have been destroyed by nitric acid, but the patient was very timid, and I thought it prudent to adopt a measure which would only be required once.

The operation is performed in the following manner: the patient, who has previously had an enema of warm water, so as thoroughly to bring down the hæmorrhoidal tumours, either kneels down upon an arm-chair, or lies on his side upon a bed or sofa. An assistant separates the buttocks, whereupon the surgeon lays hold with a long pair of forceps, or vulsellum, of the tumour which is to be operated on. The assistant makes traction with the instrument, so as to expose and isolate the tumour as much as possible. The operator then, by means of a well curved needle, set in a strong handle, passes

a double thread of strong silk or twine, through the base of the mass ; and, having cut the thread and removed the needle, ties each half of the tumour as tightly as possible. The ends of the ligatures are cut off close to the knot, and the protruded parts are returned within the bowel, and the operation is finished. It is better to notch the circumference of the tumour at the point where the ligature will fall before it is tied, as the separation will take place earlier ; for this hint I am indebted to Mr. Curling. If there are two or three distinct hæmorrhoidal tumours, each of them must be operated upon in the manner I have described.

If there is much loose integument about the anus, the redundancy should be removed with the scissors. Too much, of course, should not be taken away, as inconvenient contraction might take place ; but the surgeon who understands his business will not be likely to fall into an error of this kind. If the loose flaps of thickened integument, which are so frequently seen in connexion with hæmorrhoids, are not taken away by the scissors, there is a probability that the cure will not be perfect. Several cases have lately been under my care, where the ligature

had been applied by various surgeons, and where the disease had returned. In some of these cases, the external folds of integument had not been removed ; and I cannot help believing that this neglect had been the cause of the failure of the operations.

The proceedings above detailed are finished in a few minutes. If the patient is courageous and determined, I would rather operate without giving him chloroform ; but if he is highly sensitive and timid, it would be better that he should inhale it, as the pain in such instances may be very severe.

The patient must keep his bed for some days after the operation. A full dose of opium must be given the first night, so that pain may be prevented and the bowels be confined. If there be much pain about the seat of operation, ice applied in a bladder continuously will give great relief. Retention of urine is apt to follow this operation, and when present must be relieved by the catheter. It is desirable to keep the bowels quiet for three or four days, if possible, and then to obtain an evacuation by a dose of castor-oil. Very likely the ligatures will separate on the first action of the bowels ;

at all events, they generally come away on the fifth or sixth day. Some pain is felt in the part for a few days afterwards, and during this time the patient should keep quiet. Convalescence may be expected in a fortnight from the time of the operation.

Before leaving this part of the subject, I will give one or two illustrations of the treatment by ligature.

CASE I.—A gentleman, aged forty-nine, was sent to me, by Mr. Giraud, of Faversham, in May last. He informed me that he had suffered from hæmorrhoids for fifteen years, but that he had only been troubled with protrusion for two years, during which period he has been much annoyed, so that he was compelled to get a spring-pad—which closed the orifice of the bowel, and gave some relief, but only partial, as on walking much protrusion occurred, although the instrument was kept on. Severe hæmorrhage had also been an occasional symptom.

On examining this gentleman, I found one distinct hæmorrhoidal tumour on the left side. It was of large size, of a blue livid colour, much like a mulberry in appearance, and without

any red vascular points or arterial varices, the mucous membrane not being ulcerated. The tumour was quite isolated, and evidently composed mainly of venous ramifications. The integument around the anus was much thickened, and elongated in flaps. The general health was good; and there being no contra-indication, I recommended the use of the ligature.

The bowels having been previously well cleared out, and the hæmorrhoidal tumour well protruded, the ligature was applied June 1st. Just as I had completed the process, the patient, who was not under the influence of chloroform, made some violent expulsive efforts, and by this means forced down another small hæmorrhoidal tumour. I therefore put a ligature through this; I then excised with the scissors the redundant and thickened skin around the anus, and completed the operation.

No retention of urine followed this proceeding; but there was much flatulent distension for thirty-six hours, and sharp febrile symptoms, which lasted three days; there was more or less pain about the rectum until the seventh day, when the ligatures separated. After this

all symptoms ceased, and he left London in another week convalescent.

CASE II.—Mr. P—, aged thirty-five, consulted me in August last. He had the appearance of weak health, being pale and anxious. He informed me that he had been troubled with internal piles for many years. Latterly they had been productive of very great suffering, consisting in severe pain, especially when at the closet; bleeding had also been at times very severe. The tumours protruded largely each time the bowels were evacuated, and they always came down when he walked for any distance. His general health had been very much reduced.

On making a careful examination, after an enema of warm water had been thrown up, I found two large protrusions on the right side, of a reddish blue colour, mainly consisting of venous ramifications. On the left side there was also a protrusion, composed of a circumscribed portion of highly vascular and relaxed membrane. I strongly recommended the ligature in this case. Proper arrangements having been made, and the tumours having been well got down by an enema of warm water, the two

tumours, which were distinct, were tied in the usual manner. No serious symptoms followed, the ligatures came away on the sixth day, and the patient was up in a week.

Excellent, as a means of cure, though the ligature may be for the more severe cases of internal hæmorrhoids, it is not necessary in many instances which, nevertheless, require active surgical interference; and if we possess any means by which the disease may be cured or remedied without the confinement, and that certain amount of risk which is associated with the practice of the ligature, we are bound to consider in what cases it may be employed.

Nitric acid was strongly recommended by the late Dr. Houston, of Dublin, as a means of getting rid of some forms of internal hæmorrhoids; and it is somewhat curious that, although his paper was published in the 'Dublin Quarterly Journal,' more than fifteen years since, and Mr. Fergusson, in his 'Practical Surgery,' soon afterwards drew especial attention to the subject, the use of the agent was comparatively unknown, or, at all events, has not had that attention paid to it which it deserves. I have been in the habit of using the strong nitric acid

in certain cases of hæmorrhoidal affections for a period of ten years, and some of the observations and cases following were originally published in the columns of the 'Medical Times and Gazette,' in separate papers. Mr. Henry Lee has incorporated with his 'Surgical and Pathological Essays' an admirable paper on this subject, and has spoken highly of the plan of treatment which I am now about to consider.

I have stated, whilst describing the nature of internal hæmorrhoidal diseases, that the condition in which they are found varies. I have endeavoured to point out those cases to which the operation of the ligature is applicable, and have stated that this practice is necessary and justifiable in those instances where the tumours are large, mainly composed of tissues in which the veins predominate, and have become indurated. There are, however, other instances where the hæmorrhoidal tumours are small or moderate in size, and where they are evidently composed of morbid texture, in which the small arteries rather than the veins are interested, as shown by their bright florid aspect, and their tendency to pour out arterial blood whenever the patient is at the closet, or when the

tumours are handled. These tumours are generally not very prominent. They produce exceeding annoyance, and indeed, prove more destructive to the health, as they generally yield a great deal of blood. Now, in such cases, the ligature will undoubtedly be as effective as in the other instances before described ; but this proceeding is not necessary, as the local use of the nitric acid is so eminently suited to them. The relief which one single application of the acid gives in these cases is remarkable, and an excellent cure may be effected, if the whole of the diseased texture be subject to its action.

About these particular kind of cases, there is no doubt in the mind of any surgeon who has seen the nitric acid applied in a proper manner. There is however a mixed class of cases where the remedy is an uncertain one, but in which, nevertheless, the surgeon is justified in trying it, and where I sometimes have succeeded when I little expected it. I refer to those cases where there is a hæmorrhoidal mass, consisting perhaps of one tumour, mainly composed of venous ramifications, and of a bluish colour, with one or more presenting the characters of the florid

sessile pile ; or one portion of the tumour or tumours may present the dark blue appearance and thickened membrane, and another portion of it may be brightly vascular, have its mucous covering granular and slightly ulcerated. In this kind of mixed case, I do not hesitate to try the acid if the patient is particularly desirous, but I make a point of stating that it is impossible to depend upon any curative action in such, although in some instances the remedy has acted most efficiently.

To apply the agent to those cases where the tumours are large and indurated, and have a deep blue colour, would be perfectly useless, and only bring discredit upon the nitric acid as a means of cure in other kinds of hæmorrhoidal disease. I particularly wish to point this out, as it is very probable that some of my brethren think that I am an enthusiast with regard to the use of this remedy, and recommend it too strongly. On the contrary, I always urge upon the patient the necessity and propriety of the ligature in such, and even in the more doubtful cases just alluded to. It is not necessary, because a surgeon may have reason to adopt, with confidence, a particular

kind of remedy, that he should be an enthusiast, or should be blind to the value of those other means which are generally recognised as suitable and efficient.

It is however, in that class of cases not unfrequently met with, where there is not so much any decided hæmorrhoidal tumour, but where there is a generally congested and relaxed condition of the mucous membrane of the rectum, attended with bleeding to a greater or less extent, that the nitric acid acts so beneficially. Dr. Houston has compared this condition of the rectum not inaptly to that of the thickened conjunctiva after long-continued ophthalmia. The application of the acid to the diseased points from which the bleeding proceeds, will soon remedy all the bad symptoms.

Having described the cases to which this agent is applicable, it is fitting that something should be said about its mode of action.

When the strong nitric acid is applied in a very limited degree to the vascular mucous membrane, or granular tumour, I believe it acts beneficially, much in the same way as does the nitrate of silver, or other powerful caustic, when applied to a spongy, irritable

sore on the leg, by altering the condition of the minute vessels contracting them, and perhaps causing coagulation of the blood in them. When however it is used more freely, superficial destruction of the tissue to which it is applied takes place, an eschar forms, this is in time removed, cicatrization necessarily ensues, vessels which formerly bled are closed up, the tissues generally are braced up and contracted, and probably adhesion is formed between the mucous and muscular tissue of the gut. By further applications of the acid to the same part, the morbid texture may be actually destroyed; and hence the remedy, powerful as it is, requires great care in its use.

I will now describe the manner in which the acid should be applied.

The bowels having been well evacuated some hours previously, the diseased portion to which the application is going to be made should be well exposed, by making the patient sit over hot water for some few minutes; or, if this is not sufficient, an enema of water should be thrown up the rectum, and the hæmorrhoidal disease will be brought well into view. The part to which the acid is to be applied, should then be

carefully wiped with a portion of lint. The surgeon then dips the extremity of a small, flat piece of wood into the nitric acid, and touches the diseased surface carefully with it. The part touched, and the neighbouring mucous membrane is well smeared with oil, and the whole of the exposed part is returned within the orifice.

There are certain details connected with the application of this agent which require attention. Thus, the acid which is used should be the strongest and purest which can be obtained. I have generally employed the colourless acid, but sometimes I have thought it desirable to use the brown *fuming* nitrous acid, which acts more energetically. I have used for the most part a piece of wood as the means of carrying the acid on to the part, but some object to it as liable to be acted upon by the agent, and therefore recommend a glass rod or brush, both of which suffice very well, but I do not think it much matters.

It is important to touch the part only lightly, especially in those cases of vascular piles where bleeding easily takes places; for the blood escaping and mixing with the acid, will in a

measure neutralize its effects. I also lay great stress upon the necessity of wiping the diseased part with lint, previous to applying the acid, for there is always a certain amount of mucus covering these tumours, and unless this be removed, the nitric acid will not act efficiently.

I have recommended that the diseased parts should be brought down either by the action of an enema, or by the efforts of the patient sitting over warm water ; but there are cases where it will be difficult and unpleasant to effect this object in either way, and in this case I adopt the plan recommended many years since by Mr. Ferguson, of using a silvered glass speculum, by the introduction of which a good view of the hæmorrhoidal tumour may be had, and the nitric acid can be readily applied to the part through the instrument, into the eye of which the diseased tissue is by a little management easily engaged.

How often will it be necessary to apply the acid ? The answer to this question will depend upon the nature of each case. Where there is only one vascular tumour, or a limited amount of disease, one application, pretty freely made, will suffice ; but in cases where there are several

tumours, or points of disease, as many operations will be needful.

It is necessary for me to say a few words regarding the amount of suffering produced by the application of the nitric acid. Most persons naturally connect *pain* in their imagination with the use of any caustic, arguing from the effects of the agent on the integument. Doubtless, the various caustics which are used cannot be applied to the skin without causing much suffering; but it is far otherwise with the mucous membrane, especially that of the rectum. The general and immediate effect of the acid in most cases, is to cause merely a slight smarting or warmth, which goes off very speedily. In some instances, actual pain of a somewhat severe character is produced, especially when the surface touched is close upon the verge of the anus. There are however instances of hæmorrhoids and prolapsus of long standing, where the parts have become so insensible, that the patients actually do not know when the acid is applied. The reason why I prefer applying it through the speculum is, that the proceeding is perfectly painless, patients having asked me the question whether

the acid has been applied or not when the operation is quite finished. It is however a very different matter if any portion of the caustic comes in contact with the sensitive skin of the anus. Should such occur, the pain will be very severe, and will last for hours : hence the obvious necessity of taking the utmost precautions against this.

I can truly say that it has never occurred to me to witness anything like a fatal, or even a dangerous result, after having had a large experience of this remedy. In one case of a patient, who was most anxious to be cured by one operation, I applied the nitric acid much more freely than usual, and produced great suffering for two or three days, with the effect, however, of making a good cure. In another instance, I heard, but was not a witness of the fact, that copious bleeding followed the use of the acid. In a third instance, which occurred very lately, a young lady was treated with the nitric acid for a florid pile. Severe and unaccountable suffering was produced for many days. On making a careful examination, at the end of this period, I discovered a small ulcer, situated at the posterior verge of the

anus, and exquisitely painful ; suitable remedies relieved the pain in a few hours. On inquiring more minutely into the particulars of this case, I have reasons for believing that this ulcer existed before I applied the acid, and that some of the caustic came into contact with the sore, and produced the most severe suffering. The existence of a painful ulcer or fissure, in conjunction with hæmorrhoidal tumours, is not unfrequent ; and an examination, with the view of ascertaining this point, should be instituted, especially if it is found that the patient complains of more than usually severe pain, when at the closet, and lasting for some time subsequently. It is needless to mention that the application of the nitric acid to the rectum, when this does exist, must not be thought of.

I have now and then met with cases where retention of urine, and pretty smart bleeding, have occurred after the free use of the nitric acid, but never sufficient to cause me anxiety, and they are symptoms which are easily met.

It is not necessary to confine patients to their bed after the acid has been applied, and this is one of the reasons why the remedy is so desirable, many patients having neither the time nor inclination to submit to an operation

which may keep them from their business or pleasures for a fortnight or more.

Having explained the action of this remedy, and the means of applying it, I shall transcribe some illustrative cases, as detailed in my note-book.

CASE III.—Miss B—, aged about forty, consulted me in April, 1854. She was suffering dreadfully with hæmorrhoids, which had existed for more than twelve months. Her symptoms were great irritability of bladder and incontinence of urine; also excessive pain in the lumbar region, and altogether great distress.

On examination, I found a mass of what appeared to be external piles protruding from the anus, and internal to the sphincter were two large vascular tumours. It was one of those cases where a combined operation was necessary, —viz., the application of nitric acid to the inner vascular tumours, and the removal of the external ones with the scissors. I ordered her a purgative, and desired her to sit over hot water before my arrival next day, when, finding the parts well protruded, I applied the strong nitric acid to the two inner tumours, and at the same time cut away nearly the whole of the external mass; of course, as I used the

scissors at the same time, the patient was compelled to lie in bed, therefore I applied the acid very freely. No evil results followed its use, and on examining her at the end of a week, the internal tumours had nearly disappeared, and that symptom which was so distressing to her—namely, the incontinence of urine—had entirely left her.

In this case, which was a severe instance of internal piles, accompanied with external protrusion, I performed the two operations of applying nitric acid and removing the external tumours on the same day. I never adopt this proceeding now, believing it to be much better to destroy the internal disease first, and subsequently to cut away any external growth.

CASE IV.—Mr. T—, aged sixty-five, consulted me in May, 1854. Has suffered from hæmorrhoids upwards of twenty years, to such an extent that his comfort has been greatly interfered with; every time he went to the closet the piles came down, and sometimes to such an extent that he could fill the hollow of his hand with them when he passed them up. There was also a great deal of bleeding, and

sometimes so much that his drawers were quite saturated, so that he dared not walk out. Of late, however, this excessive hæmorrhage has not troubled him.

On examination, I discovered several large loose folds of integument around the anus, and within their circumference were seen several bright vascular masses of internal piles. I applied the strong nitric acid to one of these tumours lightly, the pain was not severe, and only of short duration, and on his next visit he stated that there had been less protrusion; I therefore used the acid on four other occasions, without giving the patient any distress, and after the fifth operation, finding that the tumours were nearly destroyed, I removed the external growths with the scissors on a separate occasion. These wounds healed rapidly, and in about a week from this date the patient considered himself perfectly cured, not being annoyed by any bleeding, or by any protrusion at the anus whilst at the closet or during walking.

I met this gentleman, quite accidentally, nearly four years after this treatment had been pursued—he assured me that the cure remained a perfect one.

I have mentioned before that a patient may entirely get rid of his disease by one application, if he will insist upon undergoing the necessary pain and confinement; but it must be used very freely, and a corresponding amount of suffering must be expected.

CASE V.—Mr. F—, aged about forty, consulted me, in May, 1854. Had suffered for many years from very painful protrusion of the mucous membrane of the rectum. He was much distressed by his complaint, and I was requested by the late Dr. Stolworthy to examine this gentleman, and do what operation I considered necessary. On examination, I discovered a very large internal tumour, of a dark bluish colour, mainly consisting of venous texture, and therefore not a kind of case to which I would generally recommend the acid. The affection was, however, the source of vast annoyance, and as the patient was a very irritable subject, and anxious to get cured by one operation, I determined to make him lie in bed, and to use the acid freely.

Accordingly, on the 14th, we obtained some of the fuming nitrous acid, and applied it very

freely over the whole diseased surface; the effect of this application was intense pain, which lasted the whole night, and to some degree for the next two or three days; but on the first occasion he had to evacuate the bowels, there was no protrusion, and none afterwards; the one application had completely destroyed the disease. I met this gentleman some time afterwards, and he told me he had continued quite well.

It is extraordinary to what an extent some patients will suffer from this affection, from fear of undergoing the operation by cutting, or by the ligature, and from ignorance of any other means of cure. Sometimes we shall meet with patients who have worn bandages or pessaries for many years. Not long since I met with a gentleman who goes about with a protrusion as large as my fist, which he keeps up with a pessary. He consulted me for another complaint, spoke to me of his hæmorrhoids, but would not submit to any operation. Many such cases may either be cured or materially relieved.

CASE VI.—Mr. G—, aged forty-five, consulted me, May, 1857. He has had great

trouble from piles and protrusion for ten or twelve years, and of late they have become so much worse that he has worn a bandage for three or four years to keep the parts in position, otherwise they generally come down whilst he is walking. On examination, I found that the cause of the protrusion was a large internal pile, not very vascular. I applied the nitrous acid to it.

On the 6th he called to say that he was already much relieved, as on evacuating the bowels he found there was less protrusion. I therefore applied the acid again, and advised him to leave off his bandage. A month afterwards, I had a letter from this gentleman, who was compelled to go into the country before the treatment was finished, and he stated that he had entirely left off the bandage, and had only "a slight inconvenience two or three times, during a little more constipation than otherwise."

In cases of this description it is generally found that the protrusion of the internal hæmorrhoids is owing to, or rather kept up by, the loose folds of thickened integument, which are so often found to be associated with piles.

In all such cases it is absolutely necessary to remove these preternatural growths with the scissors; for even where the nitric acid has done its duty well, there will be a tendency in the disease to return if these folds are not excised. I have reason to believe also, that in some of those cases where there is a return of the disease after the application of the ligature, the surgeon has neglected this most essential portion of his work.

I have described a condition of the rectum where there is a general vascular state rather than any distinct tumour, and where the most prominent symptom is hæmorrhage. This is sometimes so excessively severe as to produce an alarming effect upon the patient's health, rendering him or her pale and languid, and incapable of the ordinary duties of life; and even when the bleeding is not sufficient to produce any serious symptoms, it is a source of the utmost annoyance; for this hæmorrhagic condition of the gut the nitric acid is an admirable remedy, and especially if there is any distinct vascular mass from whence the bleeding comes.

CASE VII.—Mr. C—, aged twenty-nine, sent

to me by Dr. Beaman, October 6, 1857. He had been troubled with "piles" for two years, which had given him more or less trouble; but during the last six months there has been a considerable amount of bleeding every day; this has been increased in a great degree by violent horse-exercise, this gentleman being very fond of hunting. The hæmorrhage is the symptom for which he sought advice, although there has been some protrusion when at stool. On examination, I found the mucous membrane of the rectum in an unhealthy and congested state, and at one point a distinct vascular mass. I advised him to take a full dose of castor oil on the evening of the 7th, and to come to me on the following morning. On that day, finding the mucous membrane and the vascular mass well protruded, I touched it with strong nitric acid freely. Next day he sent for me; I found him in bed in considerable pain, the diseased surface having protruded, and the integuments being considerably swollen. I recommended him to lie in bed for a few hours, and ordered hot fomentations. In the evening I found him up, free from pain.

13th.—This patient has been in the country,

has scarcely any bleeding ; he had taken some castor-oil the previous night, which had brought the bowel down, so I applied the acid again.

15th.—Applied the acid again.

20th.—This patient scarcely complains of anything except a slight bleeding. On examination with the speculum, I found a portion of the mucous membrane in a vascular condition, and I touched it freely with nitric acid.

24th.—There is no protrusion, and only slight bleeding. I examined him again with the speculum, and applied the acid to the vascular spot. He did not even know when I was touching the part with the nitric acid, so painless was the application when used through the speculum. I saw this patient again in a few days, and wrote for him an injection containing sulphate of iron, to be used if needful.

This patient consulted me several months afterwards for another complaint, told me that he had hunted much through the season, and had not any bleeding since he left me, nor had he been compelled at any time to use the astringent lotion.

I have already stated that I would not recommend the nitric acid in those cases of hæmor-

rhoids of long standing where there are several distinct tumours of considerable size, and where, from continual irritation, they have become indurated, are not in a great degree vascular, and do not bleed. In such instances I believe it is better that the ligature should be applied, as disappointment would probably ensue, and discredit be brought upon a remedy which is so useful in proper cases. It will, however, happen that patients suffering from this aggravated form of the disorder will consult the surgeon, and will not undergo the operation of the ligature, but will readily submit to any treatment which may give a fair chance of lessening their sufferings, without producing any risk, or confining them to their bed.

CASE VIII.—Mr. G—, aged fifty-six, in weak health, consulted me May 12th. He has had piles for fifteen years, and some time since he consulted a surgeon, who recommended him to wear a pessary, which gave him some relief. During the last three years he has become much worse, the diseased parts protruding not only when at the closet, but even when he walks about. There never has been much bleeding.

I caused him to sit over hot water for some minutes, and then examining him, found a considerable tumour protruded. There were four distinct hæmorrhoidal tumours, two of them being as large as the top of the finger, very much indurated, not vascular, and not painful on pressure; the other two were smaller, more vascular, and evidently of a more recent formation than the others. Outside the sphincter was a quantity of loose and thickened integument. On the inner aspect of the larger piles the mucous membrane was thinner, somewhat abraded, and more vascular.

This case was evidently not a promising one for treatment by nitric acid; but the patient had heard of this remedy, and asked me if I could hold out any chance of relief by its means. I strongly recommended the ligature, but, on his asking the question, was obliged to tell him that this operation was not without danger. He preferred the chance of relief by the acid. The parts being well protruded, I applied the acid to the inner portion of the two large hæmorrhoidal tumours. This application was done at my own house; it gave the patient hardly any pain, and he rode home afterwards in his carriage.

14th.—He has not had any pain since the application of the acid, and there has been much less protrusion. On causing him to sit over hot water, it was difficult to get more than half what was prolapsed before. One of the large piles, however, came into view, and I touched that with the nitric acid, also one of the smaller tumours.

17th.—This gentleman has not suffered any protrusion when at the closet, and has informed me that he stood for upwards of two hours together to-day witnessing an exhibition, and that afterwards there was not any protrusion, which would most assuredly have been the case before he consulted me. As there would be some difficulty in his protruding the parts, I introduced the speculum, and applied the acid through it to one of the tumours. This application caused more smarting than any of the others.

20th.—He has suffered considerable inconvenience, but no pain since the last application; this has now gone off. He states that he is so much improved, that when he goes to the closet the piles no longer protrude. I, however, made another examination with the

speculum, and applied the acid to a portion of the disease which came into view. This application the patient literally did not feel. He is going into the country well pleased with the benefit he has obtained, and has promised to come again and see me if there be any further protrusion. I have strongly advised him to allow me to remove the loose skin from around the anus; having explained to him that in all probability if this be left it will increase, and tend to produce some further prolapsus.

This case is of necessity somewhat incomplete, but it is an instructive one, because it shows that even in those cases where the ligature is imperatively called for, apparently great relief, if not an actual cure, may be brought about by the judicious application of the nitric acid. It also illustrated another point which I have already alluded to, viz., the advantage in possessing some means which will supplant the ligature in cases where patients, either from dread or from an unwillingness to lie up, will not undergo that process, and will prefer to suffer from the pain and inconvenience of their disorder, rather than submit to the ordeal proposed; whereas on a candid explanation of the

little suffering produced by the nitric acid, and its mode of action, they will gladly take advantage of such a remedy.

CASE IX.—Mr. W—, aged thirty, consulted me March 17, 1858. He has been a delicate man always, and has suffered for the last four years from disease of the rectum, first showing itself by pain and bleeding. For the last two years he has never had a motion without losing much blood. He has been accustomed to hunt a great deal, and on his return, after a day's sport, he has found his small-clothes saturated with blood. His countenance indicated loss of blood, his face being very pallid and pasty.

On examination, I discovered that the anus was surrounded by several large excrescences of a pendulous nature; and, internally, the mucous membrane of the rectum was in a very diseased condition, there being on either side hæmorrhoidal tumours of considerable size, very vascular, and covered with a very thick and diseased membrane. Bleeding was produced by this examination. It is only latterly that this gentleman has been much annoyed by protrusion; but so great has this become, that

sometimes the gut has kept down for thirty hours at a time after an evacuation.

I explained to this gentleman that his case was one well adapted for a combined operation, that it would be necessary to cut off the external growths, and then attack the internal mischief by some other means; and, as the hæmorrhagic character was chiefly marked, I advised the application of strong nitric acid to the mucous membrane.

On the 18th I removed the pendulous growths with the scissors, and on the 21st I applied the strong nitric acid to the diseased mucous membrane. This application was not attended or followed by much pain; and on the 25th, finding the diseased surface much reduced, I applied it again. On the 29th, as there still remained a small portion of diseased mucous membrane, I made a third and last application. After this the bleeding and protrusion ceased, and the patient returned home.

This patient was confined to his bed for some days, because the use of the scissors was followed by considerable bleeding, and retention of urine.

I had the gratification of seeing this gentle-

man walk into my house on the 13th of November, just eight months after he had left my care. He was looking remarkably stout and well, and told me that, although he had hunted much, he had not had the slightest return of the bleeding or protrusion.

There are some exceedingly severe cases of internal hæmorrhoids which produce so much suffering, and are attended with such a large amount of bleeding, that the general health is reduced to a very low verge, and the most prudent course to adopt in such cases is to employ the remedy upon which the most dependence can be placed, viz., the ligature, but the condition of the health may be such as to prevent this treatment, or the patient will not be persuaded to undergo it. It is then that nitric acid may be substituted, especially if the tumours present the bright red vascular appearance before mentioned; and, if the mucous membrane is not indurated, the hæmorrhoidal tumours may be of large size, and have existed so many years, that a perfect cure cannot be brought about by the treatment in question; but such a vast amount of relief is given, that

the patient may be, in one sense, considered as cured.

CASE X.—Miss O—, aged thirty-eight, consulted me February 18th, 1859. The first symptoms of her complaint appeared five years previously, when she had hæmorrhage and protrusion of the bowel whilst at the closet. These symptoms degenerated into a severe attack, which confined her to bed for several weeks. After having partially recovered from this, she suffered more or less from both bleeding and protrusion, and her health suffered severely. The immediate cause of her applying to me was the circumstance of constant bleeding having taken place from the bowel, not only whilst she was at the closet, but even when she was quiet.

On examination, I found a considerable mass at the anus, consisting externally of long folds of thickened and loose skin, and internally of two large hæmorrhoidal tumours of a bright red colour, and having the mucous membrane slightly ulcerated. These tumours presented themselves, without any effort, on the part of

the patient. On examination of the rectum higher up with the speculum, I found the mucous membrane generally in a very vascular and thickened state. Her general health was in a wretched condition; her face was pale and bloodless, and there was an amount of muscular debility, that amounted almost to palsy. There was also that extreme and continued headache, which is such a certain accompaniment of continued and profuse bleeding.

Now, this was a case where it would, perhaps, have been best to employ the ligature, but the health was so reduced, and there were other circumstances which rendered it inexpedient, so that I thought it right to attempt to arrest the bleeding, and destroy the vascular tumours with nitric acid. I, therefore, applied the acid to a portion of the diseased tissue.

22d. Considerable pain and bleeding followed this application; but there has been less descent of the hæmorrhoids. I used the acid again.

Much less pain followed the last application, but there was more bleeding when at the closet. The bowel does not protrude half so much as it did, and the patient assures me she can

return it without any trouble. On examination I found much less protrusion. I applied the acid through the speculum.

March 1st.—Still less protrusion; applied the acid through the speculum.

7th.—The bowel has not been down for three days, since the 4th, when I used the acid again. The bleeding, although it has been much less, has not yet been arrested. I have, therefore, ordered her to throw up the sulphate of iron injection daily.

18th.—This patient called on me to-day. There has not been any bleeding for several days, and the gut no longer comes down. I recommended that she should have the pendulous flaps of thickened skin removed from around the anus. I effected this operation with the scissors.

31st.—The wounds made by the scissors are just healed. There has not been the slightest bleeding since the last report, and only on one occasion, when the bowels had been evacuated by medicine, was there any protrusion. Her general health was improved. I recommended her to continue the use of the iron lotion, and to take the confection of senna every other night.

This was one of the most severe cases for which I have used the nitric acid with such great relief. As I have before stated, had circumstances admitted it, it would have been better to have employed the ligature at once, because the effects produced by the disease were of such a nature as to preclude any treatment which might be doubtful: but I had no hesitation in telling this patient that the nitric acid would give her immense relief, and the result justified my recommendation. It is likely enough, that at some future time, this patient may suffer somewhat from bleeding, and some slight protrusion; but, should either of these symptoms take place, I doubt not that they would be remedied by the nitric acid in a very speedy manner. It has been noticed, that at the end of the treatment of this case, I removed, with the scissors, the loose folds of thickened integument from around the margin of the anus. This step is an important one after most of the operations for internal hæmorrhoids. If there is a great redundancy of skin in a diseased condition, and this is left, the chances are very great, that it will cause further descent of the bowel at some future

time. The removal of it by the knife or scissors, and the subsequent cicatrization which takes place, produces a certain amount of contraction, and bracing up of the parts which acts most beneficially in preventing a return of the disease. Of course it is necessary to be careful in avoiding the too free use of the scissors; for, if too much integument or any of the mucous membrane be taken away, great contraction might take place.

The following case illustrates the beneficial effects of nitric acid, even in a case to which, from the structure of the diseased parts, the treatment would not appear to be particularly applicable:—

CASE XI.—Mr. M—, aged forty, from Canada, consulted me August 6th, 1859. He had suffered from internal hæmorrhoids for seven years. The first symptom was severe hæmorrhage, which, a year after, became followed by protrusion whilst he was at the closet. The protruded parts became larger in size, and gradually produced increased annoyance, but the bleeding ceased. During the last five years the patient has not had a motion without the piles

protruding ; and if he went to the closet in the morning, the parts remained protruded all the day. To prevent this, he has latterly got into the habit of visiting the closet at night-time, so that the bowel goes back on retiring to bed. There is frequently a protrusion even when he is walking.

On examination, I found a very considerable protrusion, consisting, on the right side, of two or three distinct hæmorrhoidal tumours of a deep blue, venous character. On the left side, there was a portion of prolapsed mucous membrane, about the size of the top of my thumb, and but little altered from its natural appearance. Externally, there was a redundancy of loose and thickened integument. The patient was in pretty good health, but pale and spiritless.

I informed this gentleman that the ligature of the hæmorrhoidal tumours would be the most certain treatment, and that I could not confidently recommend the use of anything else ; but, as there was no doubt that the prolapsed portion of mucous membrane might be successfully treated by nitric acid, it was possible great benefit might result from the use of this agent. His time for staying in England

being limited, he wished me to try the nitric acid.

I therefore applied the acid to the prolapsed part very freely. Its use was attended with only a little smarting.

8th.—As he walked away from my house the bowel unfortunately protruded, and the patient could not return it by his own efforts; and he has suffered a good deal of pain from the parts being gripped by the sphincter. On examination, I found the protruded bowel in a semi-sloughy condition. I applied the acid again, and returned the protruded parts with great care. The manipulation necessary for this purpose produced great pain.

13th.—This gentleman came to me to-day in very good spirits, telling me that his bowels had been moved three times within the last forty-eight hours, and that there has not been any protrusion whatever.

16th.—He called to-day, and informed me that he has evacuated the bowels regularly every morning since his last visit to me, and that he has no protrusion whatever. On examination, I could not discover a trace of his disease; but there was a small external

pile posteriorly, which I snipped off with scissors.

I scarcely expected that this patient would get such a very speedy and decided cure, for the hæmorrhoidal tumours were of that nature for which I do not generally apply the nitric acid; but the action of the agent on the prolapsed portion of mucous membrane was most successful; and, moreover, the removal of the disease was doubtless much assisted by the strangulating effect of the sphincter ani on the whole mass, which was as it were accidentally kept up for some hours. This circumstance shows how necessary it is to return the bowel thoroughly after the application of the acid; for the protrusion is very liable to come down as soon as the patient moves about, unless the parts are well put back. For this reason, I prefer making the first application of the acid at the patient's own house, so that he or she may keep quiet for an hour or two afterwards, and thus prevent the possibility of a descent of the tumours.

In the next case is seen an illustration of the good effects of nitric acid, in a severe in-

stance of internal piles, attended by hæmorrhage.

CASE XII.—Mr. C—, aged twenty-three, sent to me by Dr. Beaman, May 21st. He informed me that he had been subject to internal piles for three years; they always protruded considerably when he was at the closet during the last few months, and sometimes they have come down when he has been walking. The most serious symptom however has been bleeding of a very profuse character, which has rendered him very weak. He complained much of debility and shortness of breath, and his face presented that pallid aspect which so distinctly denotes great, or long continued, loss of blood.

On examining the rectum, I discovered that the mucous membrane of the lower part of the bowel was in an unhealthy condition, and on the right side there was protruded, without any effort on the part of the patient, a large, florid, vascular pile, without any distinct base. It was just the case for the use of the nitric acid—so I applied it carefully to the hæmorrhoidal tumour.

25th. — Bleeding continues, perhaps, to a greater extent, and there is still protrusion. I applied the acid again very carefully.

28th. — This gentleman suffered considerably, for a few hours, from the last application, but he is considerably better, there is scarcely any protrusion.

June 1st. — Bleeding has almost entirely ceased, and there is no protrusion. I applied the acid again.

10th. — The patient came to-day, saying that he felt quite well, and that he has not had any protrusion at all, and that only once since I saw him was there any hæmorrhage, which was very slight when he was at the closet.

I do not think it necessary to give any further illustrations of the use of nitric acid in internal hæmorrhoids, but there are one or two points on which information may be sought; and the first is, as regards the want of success which has attended its use. It would be absurd, of course, to maintain that the nitric acid will cure or relieve all cases of internal piles. So uncertain is the practice of medicine, and even of surgery, that success cannot always be de-

pended on, even when we bring to bear the greatest skill and utmost care in the use of remedies, and it is only quacks, cancer curers, et id genus omne, who will assume infallibility for their remedies. The nitric acid will sometimes fail in doing good, and I am willing to admit that it has disappointed me; but this has been the case in only a few instances—and even in those I believe that this disappointment arose either from a want of judgment on my part, or from an improper application of the remedy. As I become more and more careful in the selection of the cases, it is my belief that the disappointments as to results will be very rare.

One word or two as to the permanency of the cure. In one of the cases mentioned in this work, I have had the opportunity of seeing the patient just four years after treatment, and he assures me that he remains quite well. I occasionally see an old naval officer, in whom I applied the acid, for very bad internal hæmorrhoids, in 1851. This gentleman told me, a few weeks since, that he has remained in great comfort, but he has sometimes a slight protrusion when at the closet. I believe that in

many instances where the nitric acid has been effectually used, the cure will be permanent ; but, doubtless, there will be, in the course of years, in severe cases, a slight return of the symptoms, especially if the patient is careless about the matter. Should this happen, however, the remedy can be applied again, and those who have once been benefited by it will be glad to avail themselves of its use. This objection, however, of the possibility of the cure not being permanent in some cases, is only that which holds good against the ligature as well ; for recently, several patients have consulted me who have had this operation performed for internal piles, by different surgeons, but in each case symptoms had recurred so severely as to drive the patient to get further advice, and another operation was necessary in these instances.

PROLAPSUS OF THE RECTUM.

DURING the time that the Rectum is evacuating its contents in a natural and normal manner, more or less extrusion of the mucous membrane occurs, but this is only momentarily. The part is immediately withdrawn within the anal orifice, and no inconvenience results. When however from some particular cause, there is any impediment to the return of this membrane, those changes which ultimately lead to the disease we are considering occur; the mucous membrane becomes congested and swollen, its attachment to the muscular tissue, naturally loose, is weakened, and in course of time the protrusion of the membrane becomes habitual — constituting one form of prolapsus of the rectum, and that the most frequent.

In other cases however, there is a protrusion, not only of the mucous and sub-mucous tissues, but of the whole of the thickness of the lower part of the bowel as well. A preparation in the Museum of King's College puts an end to all doubt on this point. This kind of prolapsus occurs not unfrequently in children, and is of very great extent, sometimes the protruded bowel being five or six inches in length. In very old people this complete prolapsus of the rectum occurs, reaching to an unusual size. On examining a recent case of prolapsus of the rectum, where the least amount of change has taken place in the structure of the parts, as for instance, in a child, the protruded part forms a tumour of an oblong shape and cylindrical form, presenting externally the smooth vascular surface of the mucous membrane, which is generally more or less of a bright red colour, and covered with mucus; at the extremity of the tumour is the orifice or cavity of the bowel, and at the anus there is no deep furrow between it and the protruded part, as there is in intussusception of the rectum. In the adult even, when the prolapse is large and of recent occurrence, the mucous membrane may be as unchanged in

appearance and texture as when it occurs in the child, but the tumour has more of a globular form.

The most frequent condition however in which a prolapsus of the rectum is seen, is where there are one or two lateral folds of the membrane varying from one to two inches in length, protruded from the anus, or one unbroken ring of protruded membrane is seen, but this is more rare. If the disease has not long existed, the membrane is not much changed in appearance being only somewhat thickened and more vascular than natural: but should the bowel have been habitually prolapsed for some years, considerable changes take place, and on examining an old case the following will be the appearances: externally, there will be a ring of thickened and congested integument; within this the flaps of mucous membrane hang down, their lower portions being much thickened, having lost the peculiar character of mucous membrane, and assimilated to integument; this change has taken place in this part because the most dependent portion is that which either habitually remains protruded altogether, or is protruded for a longer time and more exposed. On sepa-

rating the flaps of the prolapsus, the upper part of the membrane is found either but little altered from its natural character, being red, smooth and vascular, or superficial ulceration may have taken place where the two portions have been in contact. There is more or less mucous discharge produced, but in pure prolapsus there is little hæmorrhage.

Sometimes in persons advanced in life, the protruded part forms a tumour as large as the fist or larger, which has habitually protruded for a long time. In such a case a very large proportion of the tumour consists of membrane, more like leather than the natural tissue. In these old standing cases, the sphincter becomes extremely relaxed and the anus very capacious; there is generally a redundancy of loose and thickened skin around. Sometimes it hangs down in long pendulous flaps; this state of the parts adds materially to the facility of the occurrence of the prolapsus.

In many cases the prolapsus of the rectum is complicated with distinct hæmorrhoidal tumours, which in fact are mainly if not entirely the originators of the affection; for, when one or more internal tumours exist, they themselves,

each time the bowels act, become protruded, and draw portions of the mucous membrane down with them ; so that not unfrequently a patient presents himself with one or more folds of prolapsed membrane, and at the same time with distinct hæmorrhoidal tumours.

The inconvenience and suffering which prolapsus causes is considerable ; for although at the outset of the affection the protruded part may pretty readily return within the sphincter after an evacuation, as time wears on, it becomes necessary for the patient himself to return the part, which is not rarely a task of difficulty, and attended with pain. Moreover, from the contiguity of the rectum to the neck of the bladder and urethra, there is often great distress of these parts ; constant irritability and even retention of urine, being an accompaniment of the affection. Pain and uneasiness is also felt in the loins and down the thighs ; the intestinal canal and stomach also sympathise, the patient being troubled with flatulence, loss of appetite, and low spirits.

If the prolapsus, which may usually be put back, cannot be returned by the patient, and is allowed to remain, most violent symptoms

occur,—extreme pain in the part, and retention of urine ; and if unsuccessful attempts are made to reduce the swelling, which is in all probability tightly constricted by the sphincter, violent inflammation of the part, attended with severe constitutional suffering, occurs ; and in some instances sloughing of the protruded bowel takes place, by which means a cure is brought about ; but the mischief may be so severe as to cause death. In cases where a prolapsus occurs in children to a great extent, and has been allowed to remain down for two or three days, the local and constitutional changes are not so severe ; the prolapsed membrane, however, becomes exceedingly congested.

The causes of prolapsus are constitutional and local : thus, the disease is very frequently met with in individuals who have suffered from general debility and laxity of fibre. In children especially, the affection is met with in instances where the health has been much reduced by insufficient nutriment, bad air, and want of proper attention. An adult or old person who suffers much from prolapsus will have a weak pulse, a flabby tongue, and impaired digestion ; and a child presents an unhealthy and dry skin,

a foul tongue, and a tumid belly. The local causes which produce falling of the bowel in children are stone in the bladder and ascarides. In adults, constipation, sedentary occupation, the straining caused by stricture of the urethra, and enlargement of the prostate are fertile causes of the disease. There is no doubt, moreover, that the pernicious plan of frequently using copious enemata is very constantly productive of the disorder.

In considering the treatment for prolapsus of the rectum, we shall first refer to that which is necessary in removing the affection as it is met with in young children. In the first place, it is necessary to seek for this cause. And especial inquiry should be made with reference to the urinary apparatus; for it not unfrequently happens that it is the irritation of a calculus in the bladder which produces the extrusion of the gut; and if this be so, it is obvious that the only remedy consists in the removal of the stone. If there be not stone in the bladder, a collection of ascarides in the rectum may originate the disease; and the destruction of these parasites by a few doses of scammony and calomel, together with the daily injection of a

few ounces of strong infusion of quassia, will prevent the disease.

In by far the larger proportion of cases occurring in children, the general health will be found to be at fault, and this must be attended to before the prolapsus can be got rid of. In the first place, it is necessary to return the protruded bowel; and this is sometimes a work of difficulty, because the child struggles violently and cries. The protruded bowel should be gently but firmly grasped by the right hand, well oiled; careful pressure, so as to empty the vessels, should be employed, until the whole be returned within the sphincter. When the protrusion has been large, however, and the child is very violent, the gut will soon fall again; and in this case the best plan to pursue is to place the child under the influence of chloroform, and the bowel will then be readily returned. A pad and bandage should then be employed, in order to secure the part. The secretions of the liver and bowels should be rendered healthy by the use of small doses of rhubarb and Hydr. cum Creta, the skin be kept in good order by the warm bath; the child should be carried about in the fresh air,

the diet must be nutritious and in small volume, and the strength and appetite are to be increased by small doses of the Pulvis Cinchonæ and soda. As the health improves the prolapsus will cease to appear; but should this persist, the part may be bathed with a solution of sulphate of iron, gr. j. to ʒj. of water, or an injection of tincture of sesquichloride of iron; ʒj. to ʒvj. of water may be thrown up every morning after the evacuation of the bowels, and after the protrusion has been returned. In some cases the prolapsus will recur whenever the child evacuates the bowel. This, however, may be prevented by so managing that the child should be in a kneeling posture during the act. Another plan, which sometimes succeeds in preventing the protrusion, consists in an attendant drawing on one side the skin of the anus with some force during the time the bowel is being emptied. By this means a certain amount of temporary contraction is produced, which prevents the descent of the gut.

In adults, a considerable number of the cases which are not severe, and which have not been of long standing, may be cured by careful attention to the removal of those causes which

have produced it. Thus, if the affection has resulted from violent straining and constipation of the bowels, some mild aperient should be exhibited occasionally, which will prevent accumulation in the bowels, and render the contents more fluid. The compound rhubarb pill at night will have the effect, or, what is perhaps better, one or two tea-spoonfuls of confec-tion of senna should be taken. The patient should not eat largely, and should especially avoid vegetables in any quantity. He should take exercise, and be especially careful to use plenty of cold water to the parts after the action of the bowels. Occasionally a little cold water, or a few ounces of the decoction of oak-bark, may be thrown up the rectum; and if there be the least protrusion after the evacuation of the bowels, the gut, after having first been well sponged, should be carefully re-turned.

By attention to these various measures, a prolapsus of small extent and not of long standing may either be entirely cured, or may be prevented from increasing or proving troublesome, and therefore it is of the highest importance to place reliance upon medical

treatment in such cases. In by far the greater majority of cases, however, which are presented to the notice of the surgeon, the prolapsus is either very extensive, or has existed so long a time that medical treatment will be of no use whatever, and then some strictly surgical means must be adopted, if a cure or even palliation of the disease is looked for. If the case is of only recent occurrence—but the prolapsus is very voluminous and is incapable of being returned, thereby causing much alarm and suffering—it is the duty of the surgeon at once to reduce the prolapsed bowel. This is best effected by placing the patient on his side, with his knees drawn up, and grasping the tumour either with the naked hand, well oiled, or with a cloth intervening. Firm and steady compression should be used until the whole of the tumour be removed within the sphincter. The patient should then lie quiet for some hours, and afterwards a pad should be applied to the anus, and secured by a firm bandage across the perineum and around the loins. In order to prevent a return of the prolapsus, the whole or greater portion of the mucous membrane should be smeared over with solid nitrate of silver, previous

to its being returned by the surgeon. In one remarkable case of immense size, occurring in a young man, I adopted this plan with the result of obviating the necessity of a bandage which he had continually worn before.

In order to bring about an effectual cure of the more chronic and severe cases of prolapsus, more decided means must be adopted. We have seen that the disease essentially consists in a relaxed and thickened condition of the mucous membrane, and a separation as it were of them from the muscular coat, and when this is involved also, a weakness and detachment of the whole of the thickness of the bowel from the surrounding supports. The object to be obtained is to reduce the redundancy or relaxation of the mucous membrane, to promote adhesion between the several tissues composing the bowel, and to brace up the anus and the sphincter. The late Mr. Hey, of Leeds, was the first to propose a proceeding which ensured the latter result, and this consisted in removing the loose and pendulous flaps of skin, which existed around the margin of the anus, in the case alluded to by him in his "Practical Observations on Surgery," p. 443. In some cases where the sphincter is

very relaxed, and the flaps of integument very loose and thick, a cure may be brought about by the removal of these alone; but when the prolapsus is very large, and a considerable portion of the mucous membrane has become converted into tissue approaching to integument, it will be necessary to adopt the modification of the operation proposed by Dupuytren, which consists in removing radiating folds, not only of the skin at the margin of the anus, but also of the diseased mucous membrane. The operation is effected by laying hold of the fold of skin on each side of the anus, with a pair of forceps, then with a sharp pair of scissors curved, and dipping their points as it were into the anus, removing both skin and mucous membrane. In very severe cases, four or six applications of the scissors may be necessary; the operation is painful but is soon accomplished; as the wounds heal, contraction takes place, the aperture of the anus is diminished and braced up, and the prolapsus no longer occurs.

It is important to bear in mind that in very severe cases, not only is it necessary to remove the relaxed integument, but portions of the mucous membrane which, in instances of long

standing, has become converted into a tissue more like leather than anything else, must also be taken away; if this step be not resorted to, a disappointment will ensue, as regards a complete remedy of the prolapsus. Hence the surgeon must think of the possibility of somewhat severe hæmorrhage which will occasionally occur after a portion of the mucous membrane, however small, has been snipped away. I have seen it occur to a very great extent, and when it was least expected.

If hæmorrhage to a large extent does occur after a surgical operation on the rectum, the patient will in a few hours complain of tenesmus, and express a desire to go to the closet; he will then evacuate a large quantity of blood, and become faint. In such a case it will be necessary to clear away any coagula which may be in the gut, to elevate the pelvis and introduce some ice into the bowel. Should this not stop the bleeding, a careful examination should be made with a speculum if necessary, and the bleeding orifice be looked for, and tied. Sometimes it will be difficult or almost impossible to effect this, and then the rectum must be carefully plugged by portions of sponge or lint, to which a thread

should be tied in order that the compress may be more readily withdrawn when the bleeding has ceased.

It may here be stated that the risk of severe hæmorrhage, after the mucous membrane has been excised, may be in a great measure obviated by the surgeon taking care to introduce through the edges of each incision one or more fine sutures before the patient is left.

Another mode of curing prolapsus, consists in the application of the ligature to portions of the prolapsed membrane. This plan is most especially adapted to those cases where there is great laxity of the mucous membrane, and the surrounding integument is not much involved; also to those cases, very numerous, where the prolapsus is associated with one or more hæmorrhoidal tumours. This operation was originally proposed for prolapsus by the late Mr. Copland, who found it to answer his expectations most admirably. It is easily done, by pinching up with a pair of forceps small portions of the diseased membrane, applying around each a tight thread, cutting off the extremities, and returning the parts within the sphincter. If there are distinct hæmorrhoidal tumours to deal

with, the operation as undertaken for them and described in another place must be performed. As the prolapsus is in a great measure the result of the hæmorrhoids, the cure of the latter will be followed with the disappearance of the former.

CASE XIII.—The following is an instance of the cure of old prolapsus by ligature.

An officer in the army, aged forty-two, was sent to me, November, 1859, by Dr. Armstrong, of Blackrock. He had almost entirely lost the use of his bladder, being compelled to use the catheter three times a day; in addition to this great misfortune, he had a falling of the rectum, which had troubled him for twelve years, and which was increasing. The bowel protruded each time he went to the closet, necessitating its return by the hand of the patient, and sometimes this occurrence took place when he walked about; and there was a continual mucopurulent discharge which much annoyed him.

On examination, after an injection, I found that there was a portion of membrane, of considerable size, prolapsed on each side of the anus, that on the right being larger. The ex-

tremity of the prolapsed membrane, on either side, was indurated; whilst the upper portions were florid, and unchanged in appearance and texture. In addition, there were two or three small hæmorrhoidal excrescences, about the size of peas, just within the verge of the anus, and the integument was thickened and pendulous.

I gave this patient the option of either mode of treatment, by nitric acid or ligature, telling him, however, that in such a case there was much more certainty as to the effects of the latter than the former. He therefore assented to submit to the ligature, and on November 19th, having first emptied his bowels well by a large injection, and having got the part well protruded, I transfixed each of the prolapsed portions of mucous membrane with a needle carrying a double ligature, and tying the threads tightly, returned the bowel. I then snipped away, with the scissors, a greater portion of the pendulous flaps of integument. A dose of Chalk and Laudanum was given at night.

This patient did not suffer anything beyond a little distension of the belly. On the morning of the sixth day his bowels were well

cleared, for the first time after the operation, by a dose of calomel followed by castor-oil, the ligatures came away, and on the ninth day he was enabled to go out and dine at his club. His bowels acted naturally, without any prolapsus occurring.

In either of the operations just described, however, there is a certain amount of danger, and they compel a close confinement to bed and to the house for a week or two, and, therefore, if there is any other agent by which the prolapsus may be remedied, without producing either the danger to life or the confinement to bed, it should be adopted. The *strong nitric acid* which, locally applied to some forms of hæmorrhoids, is found to act so well, has lately been used by the author of this work in some severe and long-standing cases of prolapsus, with considerable success. It is, however, only in certain forms of the affection that the remedy will act with beneficial effects. In the cases of prolapsus of large size and of very long standing, where the mucous membrane has become very much thickened and changed in its structure and appearance, the acid will do little or no good ; but in those cases of simple prolapsus

of the bowel, where there are one or more large folds of mucous membrane continually down, and where the tissue is extremely vascular, presenting the appearance of smooth velvet, or is perhaps superficially ulcerated and readily bleeds, the strong nitric acid, applied carefully to the whole or the greater portion of the diseased membrane, will act like a charm. It should be used in the same manner, and with the same precautions, as when employed in instances of hæmorrhoids. If the entire surface of the prolapsed membrane be touched with it, one application alone will suffice to get rid of the disease; but it is better to apply the acid to a part only, and thus two or three operations may be necessary. This remedy, when carefully used, generally causes less pain than when it is applied to hæmorrhoids, for the mucous membrane, after having been long prolapsed, becomes much less sensitive than it usually is.

The following are instances where the nitric acid was attended with remarkable success :

CASE XIV.—A man, aged seventy, applied at the Westminster General Dispensary, August

24th, 1854. He presented the aspect of severe suffering. He had been a sufferer from prolapsus of the rectum for a period of twenty years, and latterly the protrusion had increased so much, that he was unable to return it after the bowels had been moved. There was constant protrusion, and he suffered much from pain. But the chief source of his misery was the circumstance of his having almost entirely lost control over the sphincter, so that the contents of the bowels escaped involuntarily.

On examination I discovered that there was a considerable swelling at the anus, consisting externally of loose and thickened integument, and within this, of the mucous membrane of the rectum; highly vascular, thickened and relaxed, but not changed much as regards its actual character.

I cleansed the parts well with dry lint, and applied the strong nitric acid to the whole of the protruded membrane, smeared the part abundantly with oil, and returned it within the sphincter. The patient suffered considerably, but it was mainly from my efforts to return the prolapsed intestine.

I saw this patient on the 30th. He had had

one evacuation, and stated he had more control over the sphincter. On examination, I found the protrusion much less; the mucous membrane was corrugated and hardened. I therefore applied the acid again.

At the patient's next visit to the dispensary, in a few days, I was absent, but he saw the house-surgeon, and informed him that he was better than he had been for twenty years. This gentleman applied the acid a third time.

October 9th.—This man came to-day. His countenance indicated a mind at ease, and renovated health. He informed me that he was well, and on examination I could not discover a trace of the protrusion.

CASE XV.—Colonel B—, aged seventy-three (sent by Mr. Peter Hood), applied to me, July 23d, 1859. He informed me that, so long ago as thirty years, he suffered from hæmorrhoids and prolapsus, and applied to the late Mr. Copeland, who operated on him by the ligature and scissors, with very good effect. He did not again suffer until the last three years, when the disease re-appeared. He has had a descent of the bowels generally when at the closet, and

latterly when he stands or walks about. On examination, I found a large prolapsus of the mucous membrane on the right side, and on the left side was one distinct hæmorrhoidal tumour of considerable size. The mucous membrane, at the upper portion of the prolapsus, was highly vascular, and unaltered in its character, whilst a portion of it at the inferior extremity, was thickened, and transformed almost into integument.

I applied the acid carefully to the upper portion of the prolapsed membrane; the patient did not feel the application.

25th.—No pain or irritation followed this operation. I applied the acid again.

27th.—No ill effects; the patient now finds the bowel come down less when at the closet, and it does not protrude at all when he walks about. On examination I could not see any protrusion, I therefore introduced the speculum, and applied the acid again.

29th.—He now suffers nothing from the protrusion, which scarcely comes down at all, even at the closet. I introduced the speculum, and applied the acid for the fourth and last time.

This gentleman wrote to me from abroad some little time after, to thank me for my most successful treatment of his case.

In those cases where, together with the prolapsus of the mucous membrane, there is a considerable redundancy of loose skin, or even long flaps of thick integument, around the margin of the anus, it will be necessary, after the nitric acid has caused the disappearance of the prolapsus, to excise this with the scissors, otherwise the internal mischief will be reproduced.

The following is an instance of the good effects which two or three applications of nitric acid produced in a very severe case of prolapsus, which had recurred after the operation of the ligature had been performed, some years previously, and for the relief of which the ligature again could alone be recommended with confidence.

CASE XVI.—Mrs. A—, aged about fifty, consulted me June 7th last. She informed me that she had undergone the operation by the ligature for piles fifteen years before, with relief for a time, but latterly the bowel had

protruded, and she had, from time to time, lost much blood.

On examination, after she had sat over hot water, I found a large mass at the anus, consisting, externally, of thick and pendulous folds of skin, bordering a fringe of enlarged veins; and, in the centre, was an abundance of prolapsed and thickened mucous membrane, thrown into irregular folds more or less distinct, and consisting of the entire circumference of the bowel nearly. This lady informed me that the descent of the bowel occurred, not only when she was at the closet, but when she took walking exercise, and that she suffered greatly from indigestion and flatulence; her face denoted loss of blood and impaired health.

It appeared to me at once, that any other course than that of the ligature would be useless, insomuch as the case was so severe. However, from having suffered very much when the ligature was applied before, she refused to submit to the same treatment again. I, therefore, without holding out much hope, consented to try what the nitric acid would do, although the case was by no means a suitable one for this treatment, and I applied it to a con-

siderable portion of the prolapsed bowel on the 8th.

10th.—She suffered only slightly from pain, and her bowels had been moved ; she found, to her great relief, that there was less protrusion at that time, and that there was scarcely any this day, after having walked out for a considerable time. Encouraged by this, I used the acid again more freely.

13th.—On visiting this lady to-day I found her very much better, and much pleased with the amount of relief which she had already obtained, and, on examination, I found that the acid had exerted a very beneficial effect in diminishing the prolapsus. I therefore applied it again slightly to one portion, which was protruded, and consented to her leaving London on the following day.

This case is necessarily incomplete, as sufficient time was not allowed me to give a fair trial to the nitric acid. Moreover, in order to make an effectual cure, the external loose skin should have been clipped away. I will conclude by relating one or two cases where a full trial was given to the necessary measures, and where the most excellent results occurred.

CASE XVII.—The Rev. Mr. C—, aged fifty, consulted me November 24th. He informed me that he had suffered from disease about the rectum for many years. Eight years previously he had undergone the operation of the ligature, for what he termed piles, at the hands of a surgeon in a provincial town. After recovery from this operation, he experienced but slight relief, and he continued to suffer more or less from relaxation and protrusion of the bowel. Since this period he placed himself under the care of one or two surgeons of large experience, and, in addition, placed himself in a hydropathic establishment, but he obtained no benefit.

On examination, after he had been seated over hot water, I found that there was a large prolapsus of the entire circumference of the mucous membrane of the rectum, dark and congested, but smooth, and not altered in its essential character, there being no induration whatever. There was a considerable quantity of relaxed and thickened skin around the margin of the anus. The sphincter was very much relaxed. I have seldom noticed a case where there was more relaxation. The general

health of this gentleman was not strong. He complained of a great weakness in his legs at times, and he walked as though he was semi-paralysed. He informed me that he also suffered much more from the protrusion of the rectum at one time than another, more especially when he had any particular mental work or annoyance. He also informed me, that at times he was hardly conscious of the contents of the rectum passing.

Although the ligature had been applied here, and had been followed by the return or persistence of the prolapses, I strongly recommended that the patient should submit to it again, and that the relaxed skin around the anus should be removed. I was induced to give this advice, because there was so much relaxation of the parts, and I suspect that in the former operation the very important step of removing the relaxed folds of skin had been neglected. The patient however was averse to this proceeding, and asked if any hopes could be held out of the nitric acid doing good. He was informed that relief could be certainly effected, perhaps complete.

On the 25th, after the bowel had been well

got down, I applied the nitric acid carefully to one portion of the prolapsed membrane; this application he did not feel; he was desired to lie quiet on the sofa for an hour or two.

28th.—He did not feel any pain from the acid, but there was some little difficulty in micturition, and there has been some smartish bleeding from the rectum, when at the closet; but already he has noticed a diminution of the prolapsus. On examination I found the portion of mucous membrane upon which the acid had been applied superficially ulcerated, and the volume of the gut decidedly less.

30th.—There has not been any protrusion since—by sitting over hot water, however, the patient was able to protrude the bowel, and I carefully applied the nitric acid to a part of the mucous membrane which had not been previously touched.

Dec. 2d.—No pain followed this application; he has not had any protrusion, and it is with great difficulty that any of the bowel is forced down, and then it returns immediately. I applied the acid to a small portion of the mucous membrane. On the following day I removed the relaxed skin around the anus with scissors.

8th.—He visited me to-day, stating that he has not had any prolapsus whatever; and on examination I found no protrusion of the bowel, and the wounds made by the scissors cicatrising healthily. This gentleman expressed himself as much satisfied. I enjoined him to be particular about the action of his bowels, ordering him to take occasionally two drachms of the mixed confection of black pepper and senna. I also advised him to throw up the rectum four ounces of the sulphate of iron lotion two or three times a week, and to continue it for some period.

This case particularly shows the good results which ensue from the application of the nitric acid in a very severe form of prolapsus, where the mucous membrane has not become indurated or otherwise much altered in its texture. If the tissue had been thickened or infiltrated with deposit of lymph, as is so frequently the case in old prolapsus, there would not have been any appreciable benefit; in fact, I should not have tried the acid, knowing from experience its uselessness in such a condition. When, however, the mucous membrane is soft and velvety—however large be the prolapsus—the acid will bring

about a cure or very great relief. Neither of these results, however, will be satisfactory unless the redundant skin around the margin of the anus be removed.

CASE XVIII.—Mr. H.—, aged thirty-eight, consulted me Dec. 10th. He informed me that he suffered for several years from hæmorrhage from the rectum. This had ceased for more than a year; since this time, however, he has been annoyed with prolapse of the bowel. It always descended when he was at the closet; and, of late, the gut remained down for a considerable time, varying from half an hour to three hours; when, by the aid of a sponge and cold water, it returned; during this period the uneasiness and suffering were great, but after the prolapse was put back all the symptoms disappeared. He has, on one or two occasions, been laid up with an acute attack of the disease, which has confined him to bed for some weeks. Various remedies have been tried, but none have been of any service to him.

On examination, I found that there presented at the anus, without any expulsive effort, on either side a flap of dark, smooth, velvety

mucous membrane, which was, however, so thickly covered with a dark mucous discharge that at first I thought the disease was a distinct hæmorrhoidal tumour. On carefully cleansing the parts, the swelling was found to consist of two folds of membrane, surrounded by a large quantity of loose and indurated integument. The patient informed me that the discharge was very abundant, and annoyed him exceedingly.

11th.—Having this morning well cleared the rectum out by an enema, and brought all the prolapsed membrane down, I applied the nitric acid, and returned it. The patient did not feel the application of the remedy.

13th.—He has had no pain, and the discharge is much less. There is no prolapse visible. I therefore employed the speculum, and touched a small portion of the mucous membrane with the acid.

15th.—This patient walked about a great deal yesterday, took several glasses of spirit-and-water, and had an aperient draught in the evening, which has acted powerfully this morning; and, on examination, there is a small portion of mucous membrane prolapsed, contrary

to my expectation. I therefore applied the acid again; and, having done this, and sent him home to bed, I clipped away the greater portion of the thickened skin around the anus.

17th.—He walked to my house this morning, and on examination no prolapse is visible.

This gentleman wrote to me in a week, from the country, to say that his bowels now “acted naturally, without pain, bleeding, or protrusion.” I enjoined him to be careful about keeping his bowels regular, and recommended him to use the sulphate of iron injection occasionally at night-time.

I have endeavoured in the foregoing pages to point out clearly those cases which will be cured or benefited by the use of the nitric acid, as well as those which will demand a more energetic treatment. A considerable proportion of the cases submitted to the notice of the surgeon will undoubtedly require the ligature or partial excision; and as a rule it may be affirmed, that where there is much induration of the mucous membrane, or where there are large hæmorrhoidal tumours associated with the prolapsus, the nitric acid must not be thought of, otherwise both patient and surgeon will be disap-

pointed. There are also a considerable number of instances presented to our notice, and occurring in aged persons, where an operation is absolutely necessary for a cure, but where any proceeding such as the ligature will not be submitted to by the patient, nor be deemed very advisable by the surgeon. For the most part, the protrusion in these cases is of very large size, and the tissues comprising it have become exceedingly changed and indurated, and the anal orifice is relaxed and capacious; the general health also is weak and reduced. Under these circumstances, a well-made metal pessary or a spring pad will frequently support the parts, and may be worn with great comfort.

